

CLAIMS

1. / A process for the production of a recombinant primate antibody comprising:

- (i) selecting a primate lymphocyte-derived cell line that is capable of expressing a desired antibody;
- (ii) isolating RNA from the cell line and separating mRNA from the other RNAs so isolated;
- (iii) synthesising cDNA from the mRNA and inserting the cDNA into a cloning vector;
- (iv) transforming a host cell with the vector containing the cDNA to obtain a library;

D H. ^(v) screening the library for cDNA encoding the ^{entire constant and variable regions of the} antibody heavy and light chain ^{chains} genes;
D ^(vi) inserting the cDNA encoding the ^{heavy and light chains} genes into an expression vector;
INSAI ^(viii) culturing the transfected host cell and isolating the desired antibody.

2. A process as claimed in Claim 1 wherein the primate is a human.

3. A process as claimed in Claim 1 wherein the primate is a chimpanzee or an old world monkey.

A 4. A process as claimed in ^{CLAIM 4} ~~any of Claims 1-3~~ wherein the cell-line is produced from lymphocytes from an individual known to have recovered or be in remission from a disease state.

A 5. A process as claimed in ^{CLAIM 7} ~~any of Claims 1-3~~ wherein the cell-line is produced from lymphocytes from an individual known to be infected with a pathogenic organism or is

suffering from cancer or an autoimmune disease, but who does not manifest full disease symptoms.

6. A process as claimed in Claims 4 or 5 wherein the individual has been infected by a virus.

- A* 7. A process as claimed in ^{CLAIM 1} ~~any of Claims 1-3~~ wherein the cell-line is produced from lymphocytes from an individual who has been vaccinated or inoculated with antigen and has mounted an antibody response.

- A* 8. A process as claimed in ^{CLAIM 1} ~~any of the preceding claims~~ wherein the cell-line is stabilised or immortalised.

- A* 9. A process as claimed in ^{CLAIM 1} ~~any of Claims 1-8~~ wherein the cell-line is selected by screening for production of antibody with affinity for a desired antigen.

10. A process as claimed in Claim 9 wherein the cell-line is further selected by screening for antibody functionality.

11. A process for the production of a recombinant antibody comprising:

- i) micro-RNA preparation from approximately 1000 cells;
- ii) generation of a size-selected cDNA library;
- 100%* iii) screening the library for cDNA encoding the ^{constant and variable} heavy and ^{regions of the} antibody light chains and isolating the same;
- 100%* iv) inserting the cDNA ^{encoding} the heavy and light chains into an expression vector;
- v) transfecting a host cell with the expression vector containing the cDNA; and
- vi) culturing the transfected host cell and isolating the desired antibody.

12. A vector suitable for transfection of a host cell comprising cDNA encoding primate antibody heavy and light chains.

A 13. ^A~~a~~ eukaryotic cell-line transfected with cDNA for the expression of primate antibody heavy and light chains.

14. A process for the expression of cDNA encoding primate antibody heavy and light chains, comprising transfecting a eukaryotic host cell with a vector or vectors suitable for the expression of said cDNA.

15. A recombinant primate antibody produced by:

- i) selecting a primate lymphocyte derived cell-line that is capable of expressing a desired antibody;
- ii) isolating RNA from the cell-line and separating mRNA from the other RNA so isolated;
- iii) synthesising cDNA from the mRNA and inserting the cDNA into a cloning vector;
- iv) transforming a host cell with the vector containing the cDNA to obtain a library;
- v) screening the library for cDNA encoding the antibody;
- vi) inserting the cDNA encoding the antibody into an expression vector;
- vii) transfecting a host cell with the expression vector containing the cDNA; and
- viii) culturing the transfected host cell and isolating the desired antibody.

16. A recombinant primate antibody produced by the process of culturing a eukaryotic host cell-line capable of expressing cDNA encoding primate antibody heavy and light chains.

17. A recombinant antibody as claimed in Claims 15 or 16 wherein the antibody is an anti-hepatitis virus antibody.

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18. A recombinant human anti-hepatitis virus antibody.
19. A recombinant antibody as claimed in Claim 18 wherein the hepatitis virus is hepatitis A virus.
20. A recombinant non-human primate antibody produceable by the process of culturing a eukaryotic host cell-line capable of expressing cDNA encoding non-human primate antibody heavy and light chains.
21. A recombinant non-human primate antibody.
22. A recombinant antibody as claimed in Claim 21 wherein the primate is a chimpanzee.
23. A recombinant antibody as claimed in Claim ²¹~~22~~ wherein the primate is an old world monkey.
24. A recombinant antibody as claimed in Claim 23 wherein the old world monkey is cynomolgus.
25. A pharmaceutical formulation containing a recombinant non-human primate antibody and a physiologically acceptable diluent or carrier therefor.
26. A recombinant primate antibody for use in therapy.
27. A recombinant antibody as claimed in Claim 26 wherein the primate is a human or an old world monkey.
28. Use of a recombinant ~~primate~~ antibody in the manufacture of a medicament for the treatment or prophylaxis of viral infections.

29. Use of a recombinant primate antibody in the manufacture of a medicament for the treatment of cancer.
30. Use of a recombinant human antibody in the manufacture of a medicament for the treatment or prophylaxis of exposure of a rhesus negative individual to rhesus D antigen.

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